

3-Cyano-2,4,5-trifluoro-benzoyl fluoride

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The present invention relates to 3-cyano-2,4,5-trifluorobenzoyl fluoride and to intermediates for its preparation and to the process for the preparation of 3-cyano-2,4,5-trifluoro-benzoyl fluoride, which starts from 5-fluoro-1,3-xylene (VIII); which is bichlorinated in the ring in the presence of a catalyst under ionic conditions to give 2,4-dichloro-5-fluoro-1,3-dimethylbenzene (VII). The latter is chlorinated in the side chains under free-radical conditions to give 2,4-dichloro-5-fluoro-3-dichloromethyl-1-trichloromethylbenzene (VI). The latter is hydrolysed via 2,4-dichloro-5-fluoro-3-dichloromethylbenzoic acid (V), which can be isolated if necessary, to give 2,4-dichloro-5-fluoro-3-formyl-benzoic acid (IV), the aldehyde group of which is reacted to give 2,4-dichloro-5-fluoro-3-N-hydroxyiminomethyl-benzoic acid (III), from which, with simultaneous conversion of the carboxyl group into the chlorocarbonyl group, water is eliminated using an acid chloride to give the nitrile 2,4-dichloro-3-cyano-5-fluoro-benzoyl chloride (II). Finally, the nitrile is subjected to fluorine/chlorine exchange.